

REPORT ON CORE AND PERCUSSION

DRILLING PROGRAM

RICHFIELD #1, #2, #3 & #4 , AND CDF #1-#4 M.C.s

Omineca M.D.

Latitude: N 54°34"; Longitude: W 126°14'

NTS 93 L 9W & 9E.

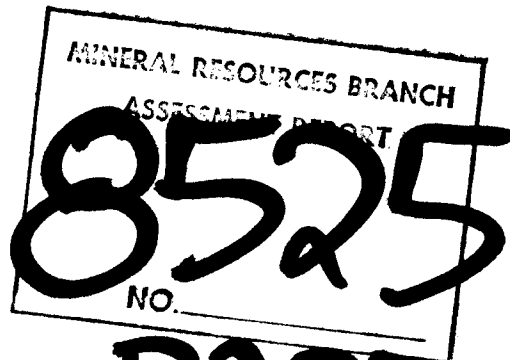
Work Program Carried Out By Cobre Exploration Ltd

Consultants: Whiting Mining Services International
Ltd.

Author : F.B. Whiting, Geological Engineer,
Ph.D., P.Eng.

Date of Work : May 1 - May 12 and July 1-Dec.30 /80

Date of Report: Dec. 30, 1980.



PART
2 of 2

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A. INTRODUCTION

Property & Location

The Richfield #1-#4 and CDF #1-#4 claims are situated 11 km north of Topley, B.C., in the Omineca M.D., on NTS maps 93 L 9E and 9W, at an elevation of 1000-1100 m, at Latitude N 54°34', Longitude W 126°15'. Access is by a dirt road branching from the Topley-Granisle highway 10 km north from Topley, thence 3 km to the northeast.

History

The showings were discovered in 1927, and work on surface and on two underground levels was carried out in 1928 and 1929. Some surface work was done in 1934-35. In 1954-57 Silver Standard Mines Ltd de-watered the old workings, re-sampled the veins, and did some drilling from surface. In 1975 Canadian Superior Exploration Ltd drilled four surface holes and had an Induced Polarization survey made. In 1979 the ground was re-staked by F.B. Whiting; a working option was granted to Cobre Exploration Ltd in mid-1979, which company had a variety of geophysical surveys made in the fall of 1979. An eight-hole drilling program was carried out from April 16 to May 12 (5 holes, # 4-#8, subsequent to April 30). A second drilling program of 20 more holes was carried out between mid-September and mid-December, 1980.

Economic Potential

Reserves exposed in the two old underground levels and indicated by former underground drilling and the 28 1980 drillholes amount to approximately 200,000 short tons containing 0.16 - 0.34 oz. gold per short ton and 2 - 8 oz. silver per s.ton. At present metal prices it appears likely that the property can

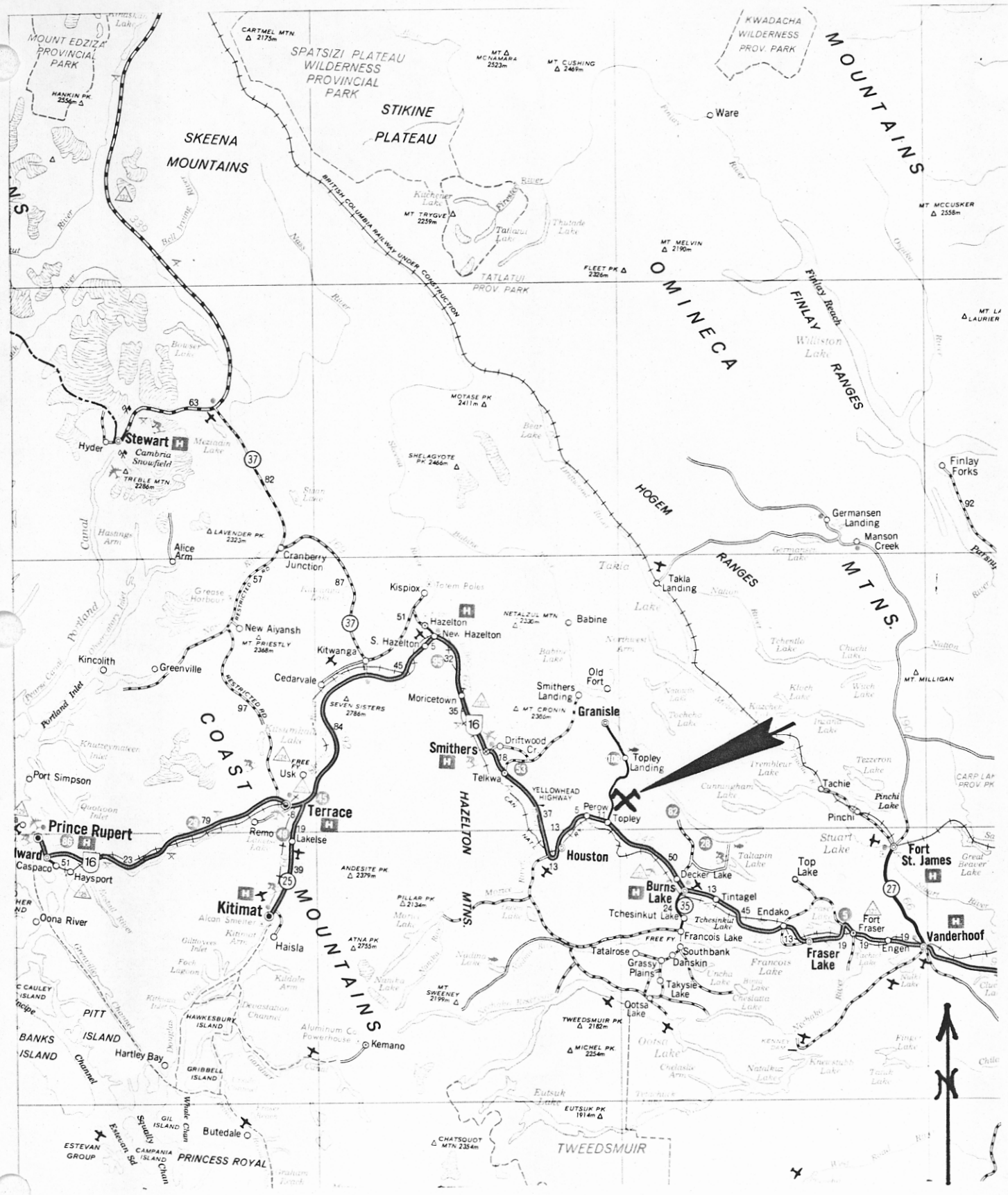
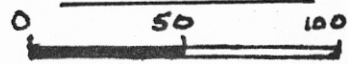


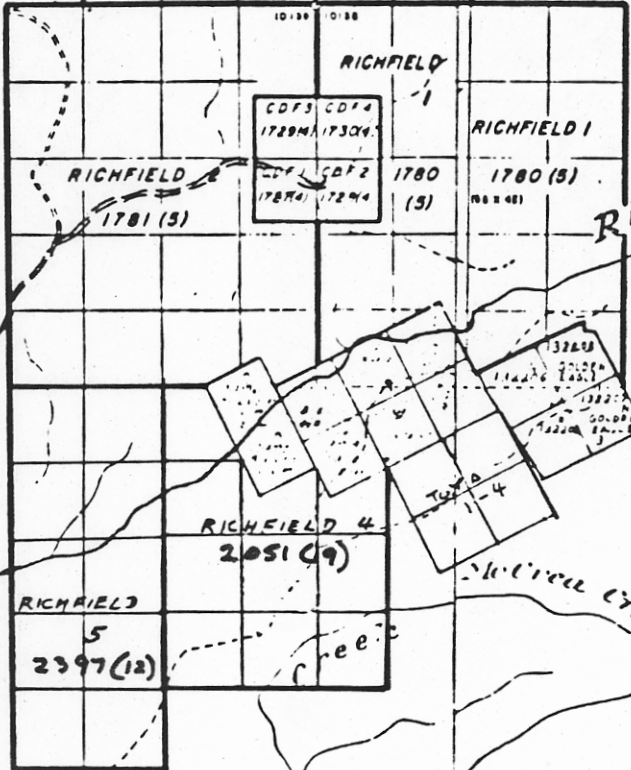
FIG. 1.



M 93L/9W

RICHFIELD 3
2050 (9)

TACHEK MTN.



Richfield

MT. MCCREA

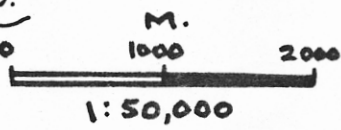


Fig. 2.

CLAIM MAP

become at least a small producer at the rate of 100-150 st/day. As the ore is of the volcanogenic type, bedded parallel to the layering in the enclosing volcanics, it may extend much farther than has yet been explored; the ore is open at depth beyond the limits tested in the 1980 drilling.

Work Summary

The work done between May 1 and December 30, 1980, which is the subject of this report, consisted of:
Drillholes #4 through # 28, size NQ.....a total of 4,602.8 m.
Accessory works: core-logging; cutting of drill access roads; surveying of hole sites and collars; assaying; preparation of plans and cross-sections; reclamation of disturbed areas; construction of a logging room and core racks; and related office work, book-keeping, drafting, copying, and report-writing.

The on-site crew ranged in number from 7 to 19 depending on the work in progress at any time.

The work was done on the CDF #1, CDF #2, and Richfield #2 M.C.s. Claims CDF #2 & #4 and Richfield #1 and #3 comprise the " Richfield 'A' Group "; claims CDF #1 & #3 and Richfield #2 and #4 comprise the " Richfield 'B' Group ".

B. TECHNICAL DATA & INTERPRETATION

Purpose of the Drilling Programs, & Results

The first drilling, in April of 1980 was directed initially to identify the source of a long, strong conductive anomaly detected in a ground E.M. survey that had been carried out in the fall of 1979. Holes #1-3 found a highly-sheared mixture of andesitic and ultrabasic rocks exhibiting strong conductivity, at the indicated position of the anomaly, and it was concluded that those rocks were the source of the geophysical indications, and were in themselves of no economic significance.

Holes #4 -#8 , drilled in May 1980, were designed to test for extensions of the known mineralization exposed in old mine workings a short distance to the east; those down-dip extensions projected beneath the sheared conductive mixed-rock unit, which lies as a cap-rock over the lower, more favorable, and in places mineralized beds. An ore intersection was obtained in Hole 80-4. Holes 80-5,-6, and-7 were drilled to the south on the strike of the "favorable" formation, but found little mineralization, as it appears that the most favorable unit has pinched out there. Hole 80-8 was drilled to fill in between the lowest old underground holes and 80-4, but had to be abandoned short of its objective owing to caving of the walls of the hole.

A second program was begun in September, aimed at tracing the ore layer north, south, and down-dip to the west from the intersection in Hole 80-4. Good mineralization of gold and silver, in bedded pyrite-sphalerite-galena-arsenopyrite layers, was encountered in Holes 80-10, 80-11, 80-13, 80-14, 80-22, 80-23, 80-25, and 80-28. Of the other holes, some were step-outs to the south, looking for new mineralized zones beyond the apparent south border of the known shoot, and the others

were similarly-intended step-outs to the north. The south step-outs suggest that the host beds thin to the south, but may be thickening again to the southwest, down the dip. The step-outs to the north found greatly-increased thicknesses of the favorable beds, with weak mineralization but no "ore"-grade intersections.

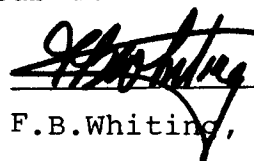
Conclusions

The type of mineralization has been clearly identified as being of the volcanogenic type, in which thin layers of sulphide minerals are deposited on the sea-floor near exhalative submarine vents. In some drillholes as many as eight distinct layers were seen, all parallel to the bedding in the enclosing rocks. Not all of these make ore, but two appear to form relatively thick beds with consistent mineralization that amount to presumably-mineable grades over acceptable mining widths. Drill-indicated reserves amount to some 200,000 short tons which at \$ Can.700 per oz. gold and \$ Can.20.00 per oz. silver average about \$ 275 per ton.

The main shoot in what has come to be called the B-C Zone has been shown to persist down the plunge from surface for a length of over 300 m, with a width of 55 - 70 m, and a thickness (diluted to a minimum 1.83 m vertical stope height) averaging about 2.2 m. Good mineralization was cut in the last hole , 80-28, the deepest down the plunge, so that this shoot is open for extension at depth.

Because of the nature of the source of the mineralization, considerable extensions are possible, as are also repetitions of sulphide shoots elsewhere along the volcanic belt.

Respectfully submitted



F.B. Whiting, Ph.D., P.Eng.

C. ITEMIZED COST STATEMENT

<u>Item</u>	<u>Dates</u>	<u>Rate</u>	<u>Total</u>
<u>Personnel:</u>			
A Danbert - field helper	May 1-28	\$8.00/hr for 180 hrs +CPP, U.I. ,tax....\$	1,539.00
	July 14- Aug. 22	\$ 8.00/hr for 300hrs + CPP, U.I., tax .. \$	2,496.00
	Oct.3- Dec.6	\$ 8.00/hr for 520 hrs + CPP, U.I.,tax.....\$	4,484.00
K. Buse - field helper	Sept.16-Oct. 6= 125 hrs	\$ 5.00 /hr	\$ 625.00
L. Nicoll - geologist	Sept.21- Dec.7: 77 days	\$ 125.00/d.	9,625.00
F.B.Whiting- geol.consult.	May 1-14,19, 20,26-29 = 19.5 days	\$ 200 /day	\$ 3,900.00
	July 19, Aug. 15,23 = 3 days	\$200/d.	\$ 600.00
	Sept.1-Oct.12 = 31.5 days	\$ 200 /day	\$ 6,300.00
	Nov.9-Dec.12 = 32 days	\$ 200 /day	\$ 6,400.00
M.J.Fitzgerald - consulting geologist	May.1-14:14 days	\$200/d.	\$ 2,800.00
	July 1-31:11.5 days	\$200	\$ 2,297.00
	Aug.1-Oct.31:19 "	\$200	\$ 3,800.00
	Nov.1-Dec.7: 35 "	@\$200	\$ 7,000.00
J.M. Fitzgerald -field help.	July22-31: 88.75 hrs	\$ 5.00/hr	\$ 443.00
			Sub-total, this page 5.. \$ 52,309.00

<u>Item</u>	<u>Dates</u>	<u>Rate</u>	<u>Total</u>
<u>Personnel, continued:</u>			
C. Merrill -field helper	Sept.21-25, Sept.29- Oct.3,Oct.7-10,Nov. 17-19 &23-27= 136.9 hrs	\$ 7.50/hr.	\$ 1,027.00
L. Merrill-field helper	Sept.21-25,Sept.28- Oct.3, Oct.6-10, Nov. 17-19,& 21-27 = 167.7 hrs	\$ 7.50/hr	\$ 1,258.00
P.Lucier - field helper	Nov.8-13: 42 hrs	\$ 7.50/hr	\$ 315.00
D. Thompson - field helper	Nov.17-19, 23-27, Dec.5= 48 hrs	\$ 7.50/hr	\$ 360.00
L.Halfe - field helper	Sept.21-25,28-Oct. 3, Oct.6-10 = 105.7 hrs	\$ 7.50/hr	\$ 793.00
D.Fast - field helper	Nov.21: 8 hrs	\$ 7.50/hr	\$ 60.00
K. Critch - " "	Sept.21-25, Sept.28- Oct.3,6-10, Nov.17- 19 & 21-27, Dec.5 = 172.7 hrs	\$ 7.50/hr	\$ 1,295.00
	Aug.1-13: 80 hrs	\$ 7.50/hr	\$ 600.00
	Aug. 17-23; 31.3 h	\$ 7.50/hr	\$ 235.00

Meals & Accomodation

Invoices of: Upland Motel, Perow, B.C.	May 1-13, 3 pers.....	\$ 1,954.00
	July 12-20, 2-3 pers.....	\$ 428.00
	Aug. 10-24, 2-5 pers.....	\$ 999.00
	Oct.10-Dec.6,3-5 pers.....	\$ 7,409.00

Meals & Groceries from
Expense Accounts:

F.B.Whiting.....	May 1-15	\$ 196.00
	Sept.16-Oct.13	\$ 895.00
	Nov.10- Dec.8	\$ 635.00
A.Danbert.....	July 17-Aug.15	\$ 405.00
	Aug.8-28	\$ 195.00
	Oct.8-29	\$ 225.00
	Nov.4- Dec.7	\$ 368.00
L. Nicoll.....	Nov.20-Dec.6	\$ 117.00
M.J.Fitzgerald.....	May 1-14	\$ 93.00
	July 1-31	\$ 458.00
	Aug.1-31	\$ 109.00
	Oct.1-Dec.7	\$ 193.00

Sub-total, this page 6. \$ 20,622.00

<u>Item</u>	<u>Dates</u>	<u>Rate</u>	<u>Total</u>
<u>Vehicle Rentals</u>			
Blazer 4x4.....	May 1-15	1645 km @ 20¢	\$ 329.00
	Sept.16- Oct.13	6150 km @ 20¢	\$ 1,230.00
	Nov. 10 - Dec.8	4994 km @25¢	\$ 1,248.00
Pick-up, 2 WD.....	July 17-Aug.15	3293 km @ 15¢	\$ 494.00
	Aug.8-25	1706 km @ 15¢	\$ 256.00
	Oct.8-29	2167 km @ 15¢	\$ 325.00
	Nov.4- Dec.8	1653 km @ 15¢	\$ 248.00
International Scout	May 1-14	1773 km @ 18¢	\$ 330.00
4 WD	July 1-31	2462 km @ 24¢	\$ 612.00
	Aug.1-31	2016 km @ 24¢	\$ 501.00
	Oct.1-Dec.7	2845 Km @ 24¢	\$ 707.00
Smithers Super Service			
2 rental pickups	Oct.27-Dec.7	Total invoice	\$ 2,851.00

Supplies, Materials:
 Gasoline, lumber for
 Core racks, nails,
 equipment rentals,
 chain saw oils, miscell.
 hardware supplies

From Expense Acc'ts:

F.B.Whiting	Sept.16- Oct.13.....	\$ 518.00
	Nov.10 - Dec.8	\$ 437.00
A.Danbert.....	Oct.8-29.....	\$ 131.00
	Nov.4-Dec.8	\$ 757.00
Morice Valley Lumber Co	core rack lumber.....	\$ 83.00
M.J.Fitzgerald...	May 1-14	\$ 124.00
	Aug.1-31.....	\$ 837.00
	Oct.1-Dec.7.....	\$ 171.00

Air Freight re Samples

From Expense Accts:

F.B.Whiting	May 1-15.....	\$ 129.00
	Sept.16- Oct.13	\$ 30.00

Invoices of Loomis

Freight re samples included in Chemex charges.

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Assaying & Sample Preparation

Chemex Labs Ltd.....Invoices from May 1-Dec.31..... \$ 7,807.00

Air Fares

M.J. Fitzgerald.....	Aug.1 -31 trips Vanc.-Smithers	\$ 370.00
L.Nicoll	Sept.20, Dec.7 Smithers-vanc.	\$ 184.00
	Sub-total, this page 7.....	\$20,709.00

<u>Item</u>	<u>Days</u>	<u>Rate</u>	<u>Total</u>
<u>Core Drilling</u>			
J.T.Thomas Drilling Co	May 1-12 & Sept. 22 - Dec.6	4602.8 m @ \$ 79.51/mtr.	\$ 365,965.00

Rotary & Percussion Drilling

Long Drilling Co.	Nov.15-Dec.6	652.24 m @ \$ 38.00 /metre	\$ 24,782.00
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Hole Surveying Equipment

Sperry-Sun Ltd	May 1 -12	Total invoice \$	596.00
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Xeroxing

Copies of logs , maps, report Dec.20-30		\$	129.00
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Total, this page....	\$	391,472.00
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" page 7.....	\$	20,709.00
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" " 6.....	\$	20,622.00
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" " 5.....	\$	52,309.00
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TOTAL EXPENDITURES.....	\$	485,112.00
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Portion of Total Expenditures incurred on Claim CDF#2.\$ 15,246.00

Portion of Total Expenditures incurred on Claims

CDF#1 and Richfield #2.....\$ 469,866.00


F.B. Whiting, P.Eng.

D. STATEMENT OF QUALIFICATIONS

NAME: WHITING, Francis B., P.Eng.

PROFESSION: Geological Engineer.

EDUCATION: B. App. Sci. in Geological Engineering,
University of British Columbia.
M.Sc. in Geology, McGill University.
Ph.D. in Geology and Economics, Massachusetts
Institute of Technology.

PROFESSIONAL ASSOCIATIONS:

Registered Professional Engineer, Province
of British Columbia.

Registered Professional Engineer, Yukon Terr.
Member, Society of Economic Geologists.

EXPERIENCE:

Pre-graduate experience in Geology with
Geological Survey of Canada and International
Mining Corporation.

One and One-half years Field Geologist for
Hedley Mascot Gold Mines, Placer Development,
and New Jersey Zinc Explorations, in B.C.

Three years as Mine Geologist, Missouri, for St.
Joseph Lead Co.

Six years as Chief Geologist, Aguilar Mine, for
Compania Minera Aguilar, S.A., Argentina.

Seven years as Exploration Chief in Argentina
for Compania Minera Aguilar S.A.

Five years as Exploration Manager, later General
Manager, for Arrow Inter-America Corporation,
in western and eastern Canada.

Three years as Regional Manager for Western
North America for Brascan Resources Limited.

Three years as Consulting Geologist, as President
of Whiting Mining Services International Ltd.

Active experience in Canada, U.S.A., Mexico,
Honduras, Brazil, Chile, Peru, Argentina,
Australia, Bolivia.

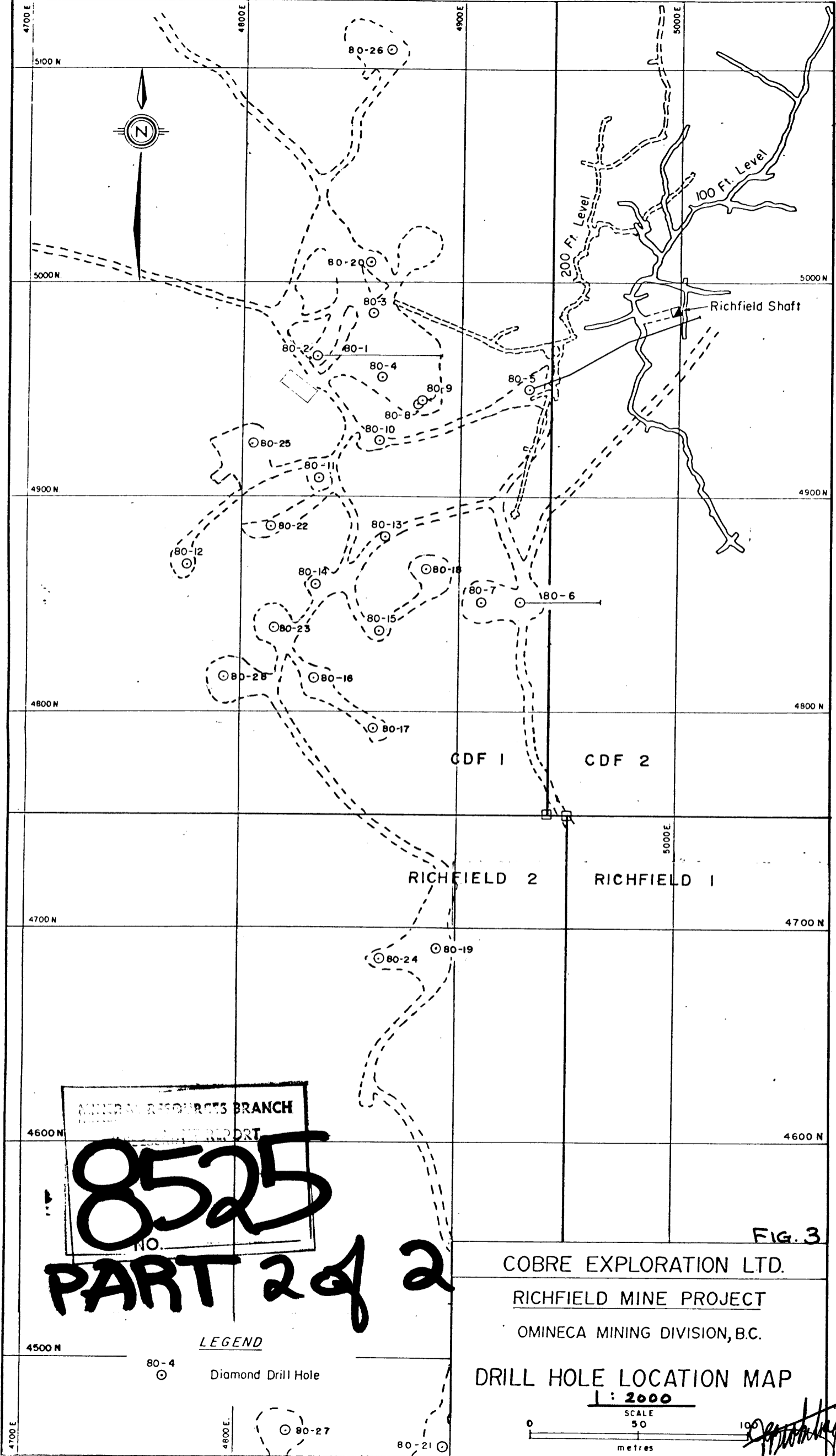
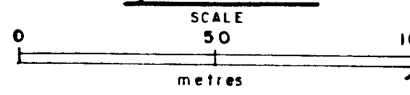


FIG. 3

COBRE EXPLORATION LTD.
 RICHFIELD MINE PROJECT
 OMINECA MINING DIVISION, B.C.

DRILL HOLE LOCATION MAP

1 : 2000



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MINERAL RESOURCES BRANCH
 REPORT NO. **8525**

PART 2 of 2

LEGEND

- 80-4 Diamond Drill Hole
- 80-27
- 80-21